



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,085	07/13/2005	Masaaki Ikeda	576P075	6741
42754	7590	01/26/2007		
NIELDS & LEMACK 176 EAST MAIN STREET, SUITE 7 WESTBORO, MA 01581			EXAMINER THOMPSON, CAMIE S	
			ART UNIT	PAPER NUMBER
			1774	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/26/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/542,085

Applicant(s)

IKEDA ET AL.

Examiner

Camie S. Thompson

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/30/05</u> . | 6) <input type="checkbox"/> Other: ____.  |

Art Unit: 1774

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

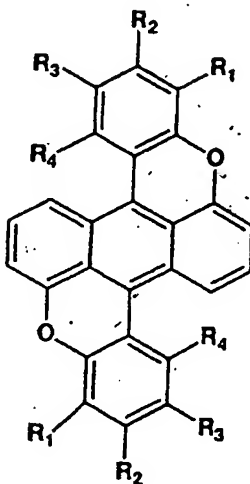
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 18-20 and 24-26 are rejected under 35 U.S.C. 102(b) as being anticipated by J.B.

Christensen et al., *Corbienes and Dioxyapyrenes- New Weitz-type Donors*, Synthetic Metals (41) 1991.

Christensen discloses corbiene and 1,6-dioxyapyrene compounds that are in the presence of a sulfonic acid compound. The reference reads on the instant claims when the compounds are

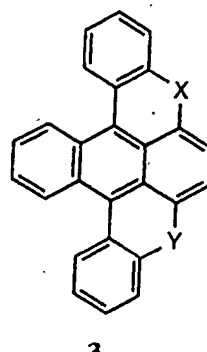
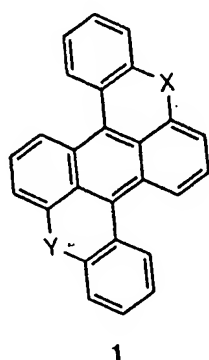


$R_1=R_2$ =methyl;  $R_1$  is methyl and  $R_2$  is hydrogen;  $R_1$  is phenyl and  $R_2$  is hydrogen and  $R_1$  to  $R_4$  of the reference is hydrogen.

Art Unit: 1774

3. Claims 18 and 20-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Tokita et al., *Molecular Design and Synthesis of Novel Analogues of Benzodixanthene and Anthradichromene*.

Tokita discloses dixanthene structures with the formulae



wherein X=Y=oxygen; X=sulfur and Y=oxygen; X=Y=sulfur; X=NPh and Y=oxygen and X=Y=NPh.

***Claim Rejections - 35 USC § 103***

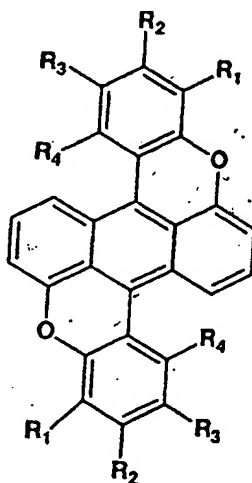
4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi, U.S. Patent Number 6,995,893 in view of Christensen et al., *Corbienes and Dioxyapyrenes- New Weitz-type Donors*, Synthetic Metals (41) 1991.

Art Unit: 1774

Kobayashi discloses an electro-optical device used in particular as display for mobile phones, personal computers and televisions (see column 1, lines 10-15). Additionally, the reference discloses that the device comprises a substrate, an anode and cathode with a light emitting layer and hole transporting layer disposed therebetween (see column 11, line 61-column 12, line 68). It is disclosed in column 13, lines 1-20 that the light emitting layer comprises low molecular weight luminous materials such as xanthene-based dyes. The Kobayashi reference does not disclose the specific xanthene based dyes as recited in the present claims. Christensen discloses corbiene and 1,6-dioxypyrene compounds that are in the presence of a sulfonic acid compound. The Christensen reads on the instant claims when the compounds are




Art Unit: 1774

the Christensen reference as xanthene based luminescent materials in order to have a light emitting device with high luminescent due to the donor properties of the Christensen compounds. Neither reference discloses that the substituent groups on the compounds comprise halogen atoms. The Kobayashi reference discloses that the light emitting layer comprises xanthene derivatives. Therefore, it would have been obvious to one of ordinary skill in the art to recognize that a xanthene derivative would include a dixanthene with a substituent group being a halogen atom.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena L Dye, can be reached at (571) 272-3186. The fax phone number for the Group is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
RENA DYE  
SUPERVISORY PATENT EXAMINER  
AU 1774